



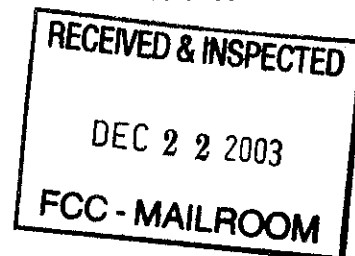
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ORIGINAL

December 17, 2003

Marlene H. Dortch, Secretary  
Federal Communications Commission  
Office of the Secretary  
445 12th Street, SW  
Washington, DC 20554



Re: ET Docket No: 03-104  
*Ex Parte filing*

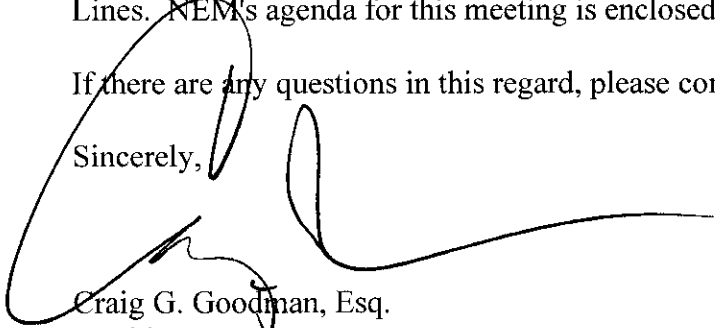
**BY FAX and FED EX DELIVERY**

Dear Ms. Dortch:

On Tuesday, December 16, 2003, Craig Goodman, Stacey Rantala, Heather Master, and Cameron Goodman of the National Energy Marketers Association (NEM); Benjamin Piilani, Lance Dascotte, Reuben Piilani, and James Sherman of the Unified Technologies Group, Inc.; Chris Beaver of The SPi Group, Inc.; and William Luke Stewart of PTS Technologies, Inc. met with Katie Costello, John Kiefer, John Gabrysch, Kyle Dixon, John Norton of the FCC's Media Bureau, Ed Thomas (Chief Engineer), Bruce Franca (Deputy Chief), Bruce Romano (Associate Chief - Legal), Alan Scime (Policy and Rules Division Chief), Ira Keltz (Policy and Rules Division Deputy Chief), and Anh Wride of the FCC's Office of Engineering and Technology; Katherine Tofigh and Elizabeth Mumaw of the FCC's Wireline Competition Bureau Telecommunications Access Policy Division; Edward Watts of the Department of Energy and David Tobenkin of the Federal Energy Regulatory Commission concerning the above-referenced proceeding. NEM discussed that Unified Technologies Group and PTS Technologies will conduct a case study using Power Measurement Informatics (PMI) technology to enhance existing Broadband Over Power Lines technology. NEM requested that the FCC promulgate definitions of "hyper speed" and "interoperable" to encourage truly advanced communications capability. NEM also discussed the issue of non-discriminatory access to utility power lines and jurisdictional issues associated with Broadband Over Power Lines. NEM's agenda for this meeting is enclosed.

If there are any questions in this regard, please contact the undersigned.

Sincerely,

  
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# National Energy Marketers Association

## Meeting with FCC

### Agenda

December 16, 2003

#### **I. Introduction of NEM and its Member Companies**

The National Energy Marketers Association (NEM) is a national, non-profit trade association representing wholesale and retail marketers of natural gas, electricity, as well as energy, financial and high-speed communications-related products, services, information and technologies throughout the United States, Canada and the U.K. NEM's membership includes independent power producers, suppliers of distributed generation, energy brokers, power traders, and electronic trading exchanges, advanced metering, demand side management and load management firms, billing, back office, customer service and related information technology providers. NEM members also include software developers and companies that are developing technology to deliver information and content over power lines at "hyper-speeds."

This regionally diverse, broad-based coalition of energy, financial service and technology firms has come together under NEM's auspices to help federal and state lawmakers and regulators implement a consumer-focused, value-driven transition to an orderly, reliable and competitive retail marketplace for energy-related products, services, information and technologies.

#### **II. *Hyper-Band<sup>TM</sup>* is a hyper-speed information transmission technology that should operate over "any transmission media," e.g. power line, fiber, satellite, wireless and PSTN communications structures**

NEM's Advanced Technology Policy Committee applauds the FCC for its encouragement of advanced information-related products, services and technologies, and most recently we are very pleased by the Notice of Inquiry relating to the Broadband over Power Lines (BPL) related issues.

NEM members are embarking on a case study to develop and field a new generation of advanced power line information and content products and services called Hyper-Band<sup>TM</sup>. Hyper-Band<sup>TM</sup> employs a new patent pending technology called PMI<sup>TM</sup>. PMI stands for both Powerline Measurement and/or Management Informatics. PMI<sup>TM</sup> technology is designed to use sensors, inductively coupled to the grid, to take measurements up to 360 million times per second. PMI<sup>TM</sup> reduces the effect of line noise, thus it may be possible to increase the power line transmission speeds of information, content and technology into the multi-gigabit range. This technology with its related products, services, and content are designed to be interoperable with virtually all existing infrastructures and downwardly compatible to existing products, services and technologies.

Unified Technologies Group and PTS Tech will be embarking on this case study with interest expressed by a number of other firms and strategic partners. It is designed to enhance and seamlessly upgrade and interoperate with existing technology. It should also be transparent to the existing system, increase transmission speeds, and increase

bandwidth by a significant magnitude. By reducing the effect of noise on the lines, it is designed to propagate a signal over increased distances and at increased speeds. In turn, this should enable a wide array of new, highly advanced, products, services, information and technologies that are currently unattainable.

### **III. Issues Raised by the Notice of Inquiry/Recent Events**

#### **A. Encouragement of Hyper-Speed BPL-Related Technology Market**

1. *Hyper-Band<sup>TM</sup>* represents a “best fits best” model of hyper-speed technology that allows for cost-effective productivity and security enhancing products and services to be developed for the U.S. and global markets using U.S.-based technology.
2. One goal of the case study is to utilize various technologies to reduce or remove the distance and density limitations as they relate to current and next-generation information transmission services and technologies.

#### **B. Potential Ubiquitous Access to Urban and Rural Consumers at Lower, Flat-Rate Prices**

By using the Nation’s current infrastructures to implement a new IP-driven Layer 1 information transmission topology, there may be a way to mitigate the “Digital Divide” by integrating fiber, wireless technology, PTSN, electric power lines and new interoperable processing engines that are downwardly compatible with current standards and deploy advanced, hyper-speed technical products and solutions under development by members of the Hypertransport<sup>TM</sup> Consortium.

#### **C. Leveraging Existing Infrastructures - Efficiency, Productivity and Economic Impacts.**

#### **D. Definitions, Standards, Protocols and Practices**

1. **FCC Proposed Definition of “Hyper-Speed”** – should transmit information at speeds no slower than 2.5 Gps. (The definition should be reviewed upward periodically to encourage truly advanced technologies).
2. **FCC Proposed Definition of “Interoperable”**. - should operate over “any transmission media,” e.g. power line, fiber, satellite, wireless and PTSN communications structures.
3. **Standards**—Inter-operative, hyper-speed BPL is designed to implement Hypertransport<sup>TM</sup> Consortium and related technologies. *See* Hypertransport<sup>TM</sup> Consortium White Paper.

#### **E. Radiated Emissions and Interference**

This technology is designed to reduce effects of “noise” on power lines.

#### **F. Valuable New Products, Services and Industries-** The ability to transmit information at hyper-speeds will encourage:

**1. Interactive capabilities beyond current standards** can enable new, interactive industries, e.g. telemedicine, education, gaming/entertainment, “smart home” interoperability, clustered or “hive computing.”

**2. Products and Services could include:**

- ◆ Affordable, flat-rate global and local information services
- ◆ Hyper-speed Internet access
- ◆ Digital CATV
- ◆ Computer networking
- ◆ Power system surveillance and predictive failure technologies
- ◆ Homeland Security applications
- ◆ Hyper-Speed Wireless™ (Beyond 3-G)
- ◆ Consumer home automation (in-house, hyper-speed automation)
- ◆ Interactive gaming

**3. Advantages to both commercial and residential customers:**

- ◆ Interoperable means expanded availability and more efficient use of existing infrastructure.
- ◆ Improved service, reliability and stability.
- ◆ Non-intrusive installation. In most cases just plug and play.
- ◆ Hyper-speed increases the opportunity for self-corrective systems
- ◆ The electric utility infrastructure is the most stable of all networks

**G. Power System Surveillance to Enhance Grid Reliability, Homeland Security and Congestion Management**

1. Ability to monitor transmission system in real-time
2. Meter readings

**Recommendations**

Members of NEM’s Advanced Energy and Power Line Technology Policy Committee request the FCC to encourage “interoperable, hyper-speed transmission technologies” by proposing definitions of “hyper-speed” and “interoperable,” and to lay the foundation for regulations that truly “encourage deployment” of “advanced telecommunications capabilities” that may be transmitted over “any media” under Part 15 as well as Section 706 of The Telecommunications Act of 1996 and the Supreme Court precedent in the case of *National Cable & Telecommunications Assn., Inc. v. Gulf Power Co.*